

Rule 21 Working Group Meeting #40 - Agenda

January 13, 2003

San Diego Gas & Electric

8306 Century Park Court, San Diego, CA

9:30 am – 4:00 pm

Combined Group Discussion (Approximately 9:30 am to 12:30 pm)

Attendees:

Pat	Aldridge	SCE	626-302-4617	Pat.Aldridge@sce.com
Tom	Blair	City of San Diego	(858) 492-6001	tblair@sandiego.gov
Petrina	Burnham	SDG&E	858-654-1712	pburnham@semprautilities.com
Jose	Cervantes	City of San Diego	(858) 492-6003	jcervantes@sandiego.gov
Herb	Clowers	Hess Microgen	775-884-1000	hclowers@hess.com
Bill	Cook	SDG&E	(858) 654-1189	wcook@semprautilities.com
Crisman	Cooley	Overdomain	(805) 683-0938	ccooley@overdomain.com
Tom	Dossey	SCE	(626) 302-8242	dossey@sce.com
Michael	Edds	Overdomain	(760) 409-3404	m.edds@ieee.org
Paul	Fukumoto	Ingersoll-Rand Energy Systems	714.799.7742	Paul_Fukumoto@irco.com
Ed	Grebel	SCE	(626) 302-8526	grebelej@sce.com
John	Horak	Basler Electric	303-730-3021	johnhorak@basler.com
Mike	Iammarino	SDG&E	(858) 650-6166	miammarino@semprautilities.com
Jerry	Jackson	PG&E	(415) 973-3655	grj4@pge.com
Alfonso	Juarez	Imperial Irrigation District	760-339-0566	ajuarez3@iid.com
Scott	Lacy	SCE	(909) 357-6589	lacysr@sce.com
Mike	Mazur	Capstone Turbine	(818) 734-5113	mmazur@capstoneturbine.com
Anthony	Mazy	CPUC/ORA	(415) 703-3036	amaz@cpuc.ca.gov
Dave	Michel	California Energy Commission	916-654-9864	dmichel@energy.state.ca.us
Randy	Minnier	MPE Consulting	858-578-4788	randy@mpeconsulting.com
Edan	Prabhu	Reflective Energies	(949) 380-4899	edanprabhu@cox.net
Debbie	Rodgers	SCE	626-302-9453	rodgerdy@sce.com
Nora	Sheriff	A-KLAW	415-421-4143	nes@a-klaw.com
Jim	Skeen	SMUD	(916) 732-5305	jskeen@smud.org
Scott	Tomashefsky	California Energy Commission	(916) 654-4896	stomashe@energy.state.ca.us
Stephen	Torres	FuelCell Energy, Inc	626-432-5410	storres@fce.com
Mohammad	Vaziri	PG&E	510-874-2535	myv1@pge.com
Chuck	Whitaker	Endecon Engineering	(925) 552-1330	chuckw@endecon.com

- Introductions, General Housekeeping, & Next Meeting Location

The next Meeting will be held February 11, 2003 at PG&E in Oakland that 1919 Webster Street.

- Utility Status Report Updates (Last One with 2002 Interconnection Data??)

The group discussed whether to change the format of the data collected. Tony M., for example, wanted to distinguish projects according to whether they required Simplified Review, Supplemental Review, or Detailed Study. The utilities did not wish to have a further complication in the data collection process, or to change their database structure. Since there was no consensus for change, the group decided that for now there would be no change in format or content of data collected.

The group's practice, as agreed last year, is to keep all completed interconnections on the list until the end of the calendar year. Accordingly, projects completed in 2002 will be dropped off the list. PG&E noted that it will keep its eNet projects online, though many were completed prior to 2002. (The eNet projects are tracked in aggregate.) No objection was raised.

- Technical Group Updates
 - IEEE P1547 Update

No change in workgroup status; 'no' votes had until January 15th to change. Status report on change in 'no' votes was expected for the week of January 20. Approval still expected by summer, 2003.

- **Supplemental Review Document (Next Steps)**

The Supplemental Review is now posted on the Energy Commission web site. Comments have been non-substantial. There was some discomfort in the Working Group about the fact that the document was released to web site just a few days before the Working Group Meeting, getting little opportunity to provide further comment prior to posting. The Technical Group will address any comments have arisen and will update the Supplemental Review document as necessary. Jerry J. and commented that a higher level explanation of the document would make it more readable and accessible to a wider audience.

- **Status of Fuel Cell Energy Certification Request (Model DFC300)**

Fuel Cell Energy is submitting Model DFC 300 with its current inverter for Certification. The application has already been submitted; Stephen T. will manage the process on behalf of FCE. The Company will submit a different model number when they submit with a different inverter manufacturer, which they plan to do; this is in recognition of the fact that the fuel cell with the different inverter must go through the same tests as the current model to ensure that the configuration with the new inverter can pass.

- **Regulatory Issues:**

- **Review of Utility Interconnection Cost Studies Filed 1/8/03**

Discussion centered around the fact that the costs submitted by the utilities do not appear to be comparable in any meaningful way. For example, PG&E's unit cost for its eNet program is 17 times larger than SCE's unit cost; its Expanded eNet program is 15 times larger than SCE's unit cost for the same size of Net Energy Metered interconnections; its Rule 21 interconnections were approximately twice as costly as those costs submitted by SDG&E.

Cost to Process Interconnections	PG&E	SCE	SDG&E
<u>Net-Metering < 10 kW</u>			
Projects	927	102	120
Total Costs	\$1,374,594	\$8,732	\$103,505
Unit Cost/ Project	\$1,483	\$86	\$863
<u>10 kW < Net-Metering < 1 MW</u>			
Projects	54	41	5
Total Costs	\$170,483	\$8,338	\$39,195
Unit Cost/ Project	\$3,157	\$203	\$7,839
<u>Non-Net-Metering < 1 MW</u>			
Projects	52	130	16
Total Costs	\$561,294	\$927,999	\$89,608
Unit Cost/ Project	\$10,794	\$7,138	\$5,601

Several people noted that they believed the fees charged under Rule 21 for Initial and Supplemental Review appear to be in line with the administrative costs borne by the utilities. However, this does not appear to be borne out by the numbers. The fees should cover administrative costs, plus Initial and Supplemental Reviews. PG&E's total cost for these two categories is \$9579; SDG&E's cost is \$5601, as stated above; SCE's cost figure lumps the hardware cost in with Interconnection Facility (hardware) costs, which makes comparison more difficult. SDG&E's cost does not breakout Interconnection Facility cost as a separate item; does that mean it is 0? Or does that mean that it is included in Initial and Supplemental Review cost? PG&E does breakout Interconnection Facility costs to arrive at the figure of \$9579 stated above. Is this entirely labor cost? If so, it far exceeds the \$1400 fee.

Some cost differential in the Net Energy Metering interconnections may be accounted for by the level of engineering and field site visits: PG&E does a site visit and "significant engineering"; Jerry J. believes that the DUIT project may help clarify some engineering issues and reduce costs for PG&E Net Energy Metering interconnections. SDG&E does a field site visit and map; SCE does not do a site visit for NEM.

SCE and SDG&E, having fulfilled the obligation to the Public Utilities Commission, under Decision 02-03-057, do not plan to collect additional cost data at this time; management and both utilities does not support further effort. PG&E intends to continue collecting cost data, though it is under no compulsion to do so, having fulfilled the PUC obligation. The question was asked whether the cost data helps the FOCUS team Cost Effectiveness study. The answer depends upon whether some common basis for the cost numbers from each utility can be found. If so the data could be very useful, though the team would need to compare against some baseline, and to track whether costs go down in the future. Project by project data would be most useful. However, PG&E stated that their current system is not set up to collect information on a project basis. Question whether this is for all cost categories, since the FOCUS team effort only concerns Rule 21 interconnections.

- Utility Advice Letter Status: Net Metering Changes Incorporating AB58
SDG&E has filed its Advice Letter. PG&E has not filed yet. SCE has not filed and does not intend to file and tell the parting load charges are calculated. CAL SEIA has filed protest in the proceeding.

- 12/27/02 ALJ Ruling Proposing Implementation of PUC Section 353.13
On December 27 2002, ALJ Cooke filed a ruling containing the following language: "Section 353.13 requires utilities to modify their tariffs so that customers installing distributed energy resources, including, but not limited to, those that meet the criteria of § 353.1, will be served under the same rates as customers with similar load profiles that do not install distributed energy resources. Section 353.13 also requires this Commission to ensure that the costs of tariff modifications resulting from these provisions are recovered only from that customer class."

The ruling further states: "For purposes of fulfilling the requirements of § 353.13 on an interim basis, I propose that the utilities modify their tariffs to allow gas-fired combined heat and power

applications five megawatts (MW) and smaller, and renewable resources as defined in D.02-10-062, 20 MW and smaller, who meet all the other criteria in § 353.1 to be served under the same rates as customers with similar load profiles that do not install distributed energy resources as long as the new generation unit is installed prior to December 31, 2004. These tariffs will be in effect until June 1, 2011."

Utilities have until January 21, 2003 to file comments on the Ruling; reply comments will be filed by January 28, 2003.

- Update on FERC ANOPR

SCE has filed comments. Discussions at the FERC ANOPR center on the lack of standard Interconnection agreements. Question also about the administrative load for negotiating the agreements. California utilities have Wholesale Distribution Access Tariffs (WDAT); many utilities elsewhere in the U.S. do not have WDATs. The difficulty was discussed of regional differences.

- FOCUS Team Projects

- DG Monitoring Study Update

The DG Monitoring Study now has a domain name of www.DGMonitors.com. The web site is not yet fully operational, however.

Non-Technical Breakout

- Utility Interconnection Cost Study Follow-up

- Any desire to track future interconnection costs and time?

No further discussion.

- Utility Proposals for Implementing Section 353.13 per 12/27/02 ALJ Ruling

No further discussion.

- Developing Permanent Metering Requirements

- Review of Net Generation Output Metering Document

CAC/EPUC clarified its position, in a change to Meeting Minutes 12-10-2002, as follows (added language is in italics) :

Two camps: *RealEnergy/MPE*, Randy M: Metering is required and 3rd party wants to provide; CAC/EPUC: *Customer is not required to agree to metering if a less-intrusive or more cost effective alternative is available, so customer may provide estimates; if a utility wishes to require net generation metering, it must consider the "laundry list" of factors in Section F, sub 3 of Rule 21 and report its reasoning to the CPUC. The CAC/EPUC position has a basis in Rule 21 today.*

The discussion began with Tony M. stating that the Office of Ratepayer Advocates (ORA) was of the opinion (in Tony's estimation) that SB1x28 makes Distributed Generation exempt from Metering for a single customer on a single site that is not exporting power. The group also recalled these Cal ISO position and added to the list of positions, which now stand at 5:

1. CAC/EPUC: Customer is not required to agree to metering if a less-intrusive or more cost effective alternative is available, so customer may provide estimates; if a utility wishes to require net generation metering, it must consider the "laundry list" of factors in Section F, sub 3 of Rule 21 and report its reasoning to the CPUC.
2. RealEnergy/MPE: Rule should allow third-party ownership of the meter. It is technically feasible to provide the data in a format that will be compatible (will "mesh") with utility information technology formats.
3. Investor-Owned Utilities: Meter should be owned by utility for data verification. In those instances that exist today in which third parties own the meter, we have not been receiving the data in a format that is compatible with our internal systems; the data is requiring manual input.
4. Cal ISO: [paraphrase] We want to gather telemetered data from all generators larger than 1MW.
5. ORA: SB1x 28 legislation precludes metering of qualifying customers differently from non-generating customers. (Subject to statutory sunset... if any.)

Question whether it the working group is now at a point where a Resolution is required. Could be a CPUC proceeding, either a new proceeding or combined with the existing Advanced Metering Order Instituting Investigation.

Possibility of Advice letters with protests.

- Development of Net Energy Metering Language

No discussion.

- Proposals to Add 10-year Term to Interconnection Agreement for IRS Purposes

This topic was withdrawn.

- Potential Changes to Application Forms

This will be taken up at the next meeting.

Technical Breakout

- Continuing Review of Fuel Cell Energy Certification Request (Model DFC300)

Chuck Whitaker spoke with UL prior to the meeting. Most of the few minor issues raised by the committee were addressed and UL noted that a letter formally addressing all of the issues was forthcoming. That information will be reviewed and discussed by the certification subcommittee via e-mail or conference call.

- Consideration of Rule 21 Certification Requirement Modifications
- Potential Changes to Initial Review Process Screens
 - Export Screen
 - Others???
- Technical Discussion of Accommodating P1547 in Rule 21

The remainder of the meeting was spent reviewing and prioritizing items on the Technical Bin List. A revised version of that list, which includes a few additions made after the meeting follows:

California Rule 21 Workgroup – Technical Issues Bin List

Priority	Issue	Where	Who
1	Disconnect switch requirements	SupRev	Lacy
1	Nominal voltage – Definition; Use of 120, nominal vs typical vs average; relay settings	SupRev	Edd
1	Modify Export Screen	Rule 21	Whitaker
1	Inadvertent Export	Rule 21	Cook
1	Disclaimer on SupRev Web page	Sup Rev	Whitaker
1	Address net-metered systems in Rule 21	Rule 21	
2	Technical aspects of metering (e.g., Net Generation Output) Need input from non-tech	Rule 21	
2	Define Requirements for relays (for non-certified equipment)	Rule 21/SupRev	
2	Review/adopt IEEE 1547 requirements	Rule 21	
2	Review/adopt FERC small gen requirements	Rule 21	
2	Supplemental Review Guideline updates	Rule 21	
3	Networks	Rule 21	
3	Additional Definitions	SupRev	
3	Bibliography	SupRev	
	Loss of Synchronization Requirements		
	Test and Certification: Rotating Machine tests	Rule 21	
	Clarification of Inadvertent vs. Incidental Export	Rule 21	
	Clarification of use of transfer switch package in D.1.b	Rule 21	
	Clarification in I.3.b(2) that the reverse or minimum power relay does not have to be at the PCC, to allow for eligible and non-eligible generators on the same service account, as required in the proposed decision on R95-10-025, issued 1/10/03	Rule 21	
	Clarification of non-islanding, anti-islanding, active anti-islanding, positive anti-islanding	Rule 21	
	Clarification of the 2 second allowance in J.7.a(3) method 2 versus 1 second for Momentary parallel	Rule 21	
	Define the term “promptly” in D.3.b(2) (2 seconds?)	Rule 21	

17-Jan-03

Minutes prepared by:

